REMARKS

I. Status of the Claims

Claims 1-45 are pending. Claims 19-23 and 45 have been canceled. Claims 35-36 and 38-43 are withdrawn from consideration as being drawn to a non-elected invention. Claims 1-18, 24-34, 37 and 44 are currently being examined. Both the specification and the claims have been amended to correct typographical errors as to punctuation. Claims 3 and 27 as well as page 10 of the specification have also been amended to fix a typographical error in formula (II). Claims 1, 12, 24, and 32 have been further amended to further clarify Applicants' claimed invention. Claim 44 and new claim ~~47~~ 46 are drawn to a method of delivering a therapeutic agent. Support for the amendments to the claims can be found in the claims as originally filed and throughout the specification. Support for the amendment to claim 44 and new claim ~~47~~ 46 can be found in claim 44 as originally filed and pp. 27-28 of the specification. No new matter is added by this amendment. Claims 1-18, 24-34, 37, 44 and ~~47~~ 46 are currently pending.

II. The Rejection of Claims 1-18, 24-34, 37 and 44 under 35 U.S.C. §112, Second Paragraph

Claims 1-18, 24-34, 37 and 44 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for filing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants disagree and respectfully traverse the rejection.

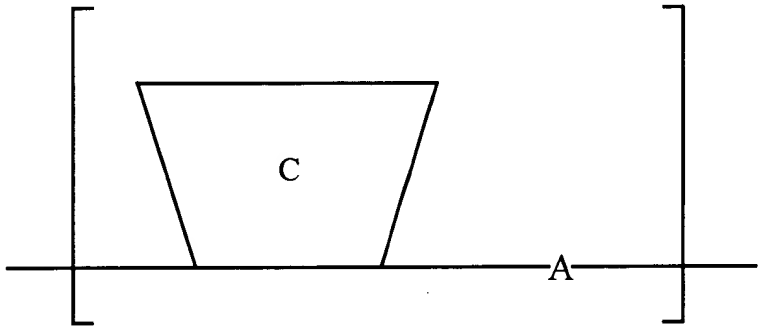
A. Claim 1.

(1) "Repeating Units of Formula Ia, Ib or combinations thereof"

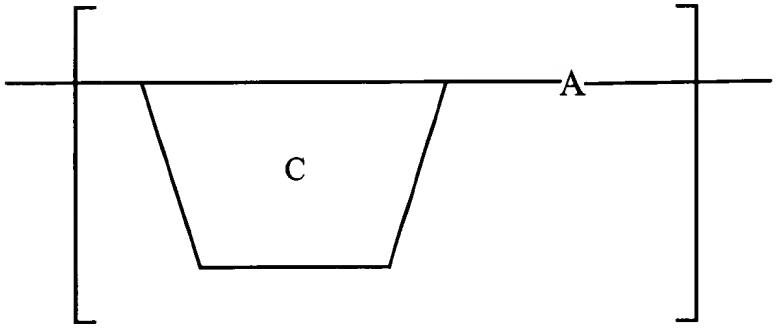
As expressed on pp. 3-4 of the Office action, it is the Examiner's position that the schematic diagrams representing repeating units of "Ia, Ib or combinations thereof" are indefinite because the schematic drawings do not provide complete information concerning the specific molecular

interconnections which are required to understand with particularity the structures of the intended copolymers. Applicants' respectfully disagree and traverse this rejection.

Applicants' claimed invention is a linear cyclodextrin copolymer comprising repeating units of formula Ia, Ib or a combination thereof:



(Ia) , and



(Ib)

As a result of having repeating units of formula Ia, Ib or a combination thereof, a linear copolymer results having cyclodextrin moieties within the polymer backbone chain itself, hence a linear

cyclodextrin copolymer. The claimed "monomer units" of formulae Ia and Ib contain a substituted or unsubstituted cyclodextrin monomer C and a comonomer A bound to cyclodextrin C.

According to MPEP 2173.05(t), first paragraph:

> Claims to chemical compounds and compositions containing chemical compounds often use formulas that depict the chemical structure of the compound. ***These structures should not be considered indefinite nor speculative in the absence of evidence that the assigned formula is in error.*** The absence of corroborating spectroscopic or other data cannot be the basis for finding the structure indefinite. (Emphasis added)

Furthermore, according to MPEP 2173.05(t), second paragraph:

> A claim to a chemical compound is not indefinite merely because a structure is not presented or ***because a partial structure is presented*** ... Chemical compounds may be claimed by a name that adequately describes the material to one skilled in the art. (Emphasis added)

Here, Applicants have claimed a structural monomer unit to form its claimed copolymer and have named each member of the structural monomer unit within the claim. Furthermore, as explained on page 3 of the specification, a cyclodextrin moiety is commonly represented in the art as a "cup" of which the wider side of the cyclodextrin cup represents the 2° hydroxyl side of a cyclodextrin while the narrower side of the cyclodextrin cup represents the 1° hydroxyl side of a cyclodextrin. The claim is not indefinite. Applicants respectfully request this rejection be withdrawn.

(2) The term "polymer comprising"

The Examiner also states that the term "polymer comprising" is incorrect when directed to a compound. Applicants respectfully traverse the rejection.

As discussed above, Applicants claimed linear cyclodextrin copolymer is a polymer based on repeating units of formula (Ia), (Ib), or a combination thereof such that the resulting linear cyclodextrin copolymer has cyclodextrin moieties within the polymer backbone itself. Specification, p. 7, last full paragraph. By virtue of the term "repeating", two or more monomer

units of formula Ia, Ib or a combination thereof make up the claimed linear cyclodextrin copolymer and thus ensures that the resulting polymer will have cyclodextrin moieties within the polymer backbone. Since the copolymer of Applicants' claimed composition contains at least repeating units of formula Ia, Ib or a combination, the term "comprising" is not indefinite. For the reasons given above, the term "polymer comprising" is not incorrect. Applicants respectfully request this rejection be withdrawn.

(2) The term "C is a substituted or unsubstituted cyclodextrin monomer and A is a comonomer bound to the cyclodextrin"

It is the Examiner's position that the term "C is a substituted or unsubstituted cyclodextrin monomer and A is a comonomer bound to the cyclodextrin" is indefinite for the following reasons:

i) the nature of the substituents have not been defined rendering the definition incomplete;

ii) the specific attachment points apparently hinted at by the schematic representations of the cyclodextrin-A moieties have not been defined rendering the definition incomplete; and

iii) the comonomer "A" is not further defined in any way rendering the definition complete. Applicants respectfully disagree and traverse the rejection.

According to MPEP 2111.01, "Applicant may be his or her own lexicographer as long as the meaning assigned to the term is not repugnant to the term's well known usage." Also according to MPEP 2111.01, "...[d]uring examination, the claims must be interpreted as broadly as their terms reasonably allow. This means that the words of the claim must be given their plain meaning ***unless applicant has provided a clear definition in the specification***." (Emphasis added). Here, Applicant has clearly defined in the specification each claimed term.

According to Applicants' invention, a "cyclodextrin monomer C" is based on a "cyclodextrin monomer C precursor"which is defined and described on p. 8, last paragraph through p. 11, ln. 12 of the specification. A "comonomer A" is based on a "comonomer A precursor" which is defined and described on p. 11, ln. 13 through p. 15, ln. 9 of the specification. For example, cyclodextrin monomer C may be "...any substituted cyclodextrin known in the art where the

substituent does not interfere with copolymerization with comonomer A." Specification, p. 9, lns. 2-4. Examples of suitable substituents of cyclodextrin monomer C are defined on page 9, lns. 6-12 of the specification. Comonomer A precursor, which upon copolymerization with cyclodextrin monomer C becomes comonomer A, is "...a compound containing at least two functional groups through which reaction and thus linkage of two cyclodextrin monomers can be achieved." Specification, p. 12, lns. 6-8. Comonomer A precursor may be a straight chain or branched, symmetric or asymmetric compound. Specification, p. 12, lns. 3-5. Examples of comonomer A precursor and comonomer A linkages are described on p. 12, ln. 22 through p. 15, ln. 11. Furthermore, the specification states that:

> [u]pon copolymerization of a comonomer A precursor with a cyclodextrin monomer precursor, two cyclodextrin monomers may be linked together by joining the primary hydroxyl side of one cyclodextrin monomer with the primary hydroxyl side of another cyclodextrin monomer, by joining the secondary hydroxyl side of one cyclodextrin monomer with the secondary hydroxyl side of another cyclodextrin monomer, or by joining the primary hydroxyl side of one cyclodextrin monomer with the secondary hydroxyl side of another cyclodextrin monomer. Accordingly, combinations of such linkages may exist in the final copolymer.

Specification, p. 12, lns. 11-17. Thus, point of attachment of comonomer A to cyclodextrin monomer C may vary. However, such variations in attachment need not be claimed since the claim recites units of formulae (Ia) and (Ib) from which one of ordinary skill in the art would understand that attachment of comonomer A to cyclodextrin C would vary. Thus, since each member of the claimed linear cyclodextrin copolymer is clearly defined in the specification, the claims as written particularly point out and distinctly claim the subject matter Applicants regard as the invention. The claim is not indefinite. Applicants respectfully request this rejection be withdrawn.

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B. Claims 3 and 27

The rejection of claims 3 and 27 regarding the "nominally pentopyranose ring" has been rendered moot by this amendment. Applicants have amended the claims to fix the typographical error to the structure of formula (II). Applicants respectfully request this rejection be withdrawn.

C. Claims 3, 4, 5, 28 and 29

It is the Examiner's position that the term "cyclodextrin monomer," the chemical formula (II) and the Markush group members of claim 3 are technically inconsistent. Applicants respectfully disagree and traverse this rejection.

Claim 3 is a dependent claim further defining the cyclodextrin monomer C of claim 1 to a cyclodextrin monomer of formula (II). Specific compounds of formula (II), depending upon variables n and m of formula (II), are also claimed and are listed in Markush format. Likewise, Claims 4 and 28 are dependent claims further defining the cyclodextrin monomer C of claim 1 to a cyclodextrin monomer of formula (III). Specific compounds of formula (III), depending upon variable p, are claimed in Markush format in dependent claims 5 and 29, respectively. Based on formulae II and III, cyclodextrin monomer C is difunctional. Applicants do not consider additional language to be necessary. The claim as written distinctly claims the subject matter of Applicants' invention. Applicants respectfully request this rejection be withdrawn.

D. Claims 6 and 30

(1) Markush listing

The rejection of the claims under 35 U.S.C. § 112, second paragraph, for failure to have appropriate punctuation has been rendered moot by the amendments to claims 6 and 30 correcting typographical errors. Applicants respectfully request this rejection be withdrawn.

(2) Internal Inconsistency

It is the Examiner's position that Claims 6 and 30 are internally inconsistent because some secondary amine functions are protonated while others are not. Applicants respectfully traverse this rejection.

Both dependent Claims 6 and 30 further define comonomer A. Whether a comonomer A unit will be protonated or not will depend upon the degree of substitution on the nitrogen. If a nitrogen is joined to four groups, then a quaternary ammonium moiety results and is protonated. If a comonomer A moiety does not contain a quaternary ammonium moiety, then it will not be protonated. As illustrated, the N of $-^{+}H_2NNHC(O)-$ is tetravalent and thus protonated. As discussed on page 12, lns. 17-21 of the specification, comonomer A may be neutral, cationic, or anionic and the charge of comonomer A may be adjusted by adjusting pH conditions. Thus, the amended claims as written and in view of the specification are definite. The claims are not internally inconsistent. Applicants respectfully request this rejection be withdrawn.

E. Claim 7.

It is the Examiner's position that the term "A is biodegradable or acid-labile" is functional language not easily translatable into specific chemical structures, thereby rendering the metes and bounds of the instant claim indefinite. Applicants' respectfully traverse this rejection.

As discussed above, comonomer A is a member of a monomer unit of formula Ia or Ib that upon polymerization with cyclodextrin C form Applicants' claimed linear cyclodextrin copolymer. The terms "biodegradable" and "acid-labile" are terms of art that would be understood by one of ordinary skill in the art to mean that the linear cyclodextrin copolymer could be cleaved at a comonomer A position via biodegradation or addition of acid. The claim as written clearly defines Applicants' invention and hence is not indefinite. Applicants respectfully request this rejection be withdrawn.

A

F. Claims 8 and 13.

It is the Examiner's position that the term "crosslinked to another polymer" begs the question of "How?" or more specifically "with what included functionality?" or "with what type of crosslinking reagent interacting with which included functionality?" Applicants respectfully traverse this rejection.

As discussed above, Applicants' claimed invention is a linear cyclodextrin copolymer comprising repeating units of formula Ia, Ib or a combination thereof. According to Applicants' claimed invention, the linear cyclodextrin copolymer is crosslinked to another polymer. The term "crosslinked" is a term of art which refers to the attachment of two chains of polymer molecules by bridging (Exhibit A). Since the term "crosslinked" is a term of art, the claim as written clearly defines the subject matter of Applicants' invention.

The Examiner's questions of "how" and "where" are questions to enablement and not to indefiniteness. Regardless, page 26-27 of the specification describes various crosslinking agents, methods of crosslinking, and the types of polymers a linear cyclodextrin copolymer may be crosslinked to. Thus, claims 8 and 13 not only particularly point out and distinctly claim Applicants' invention, they also are fully enabled by the disclosure of the specification. Applicants respectfully request this rejection be withdrawn.

G. Claims 9, 10, 14, 15, 31 and 37.

It is the Examiner's position that the term "at least one ligand is bound to the linear cyclodextrin copolymer" implies subject matter ("ligand") which is open to various interpretations. Applicants respectfully disagree and traverse this rejection.

Claims 9, 10, 14, 15, 31 and 37 are dependent claims further defining Applicants' claimed invention to have at least one ligand bound to the linear cyclodextrin copolymer. As a result of dependency a "ligand" is something other than the linear cyclodextrin copolymer. Furthermore, since the ligand is "bound to" the linear cyclodextrin copolymer, the ligand is appended to the linear

cyclodextrin. Thus, contrary to the Examiner's assertions, no confusion with the cyclodextrin moieties of the linear cyclodextrin copolymer would exist. Thus, the claims as written particularly point out and distinctly claim the subject matter Applicants regard as the invention. The claims are not indefinite. Applicants respectfully request this rejection be withdrawn.

H. Claims 11, 16, 17 and 37.

The Examiner has found the term "wherein at least one cyclodextrin monomer C of said linear cyclodextrin copolymer is oxidized" indefinite for failure to specify what is meant by the term "oxidized" as expressed on p. 4, lns. 13-25 of the Office Action. Applicants respectfully disagree and traverse this rejection.

According to Applicants' invention, a linear oxidized cyclodextrin copolymer is defined as a linear cyclodextrin copolymer which contains at least one oxidized cyclodextrin monomer. Specification, p. 20, lns. 7-9. The cyclodextrin monomer may be oxidized on the secondary and/or primary hydroxyl side of the cyclodextrin moiety. If more than one oxidized cyclodextrin monomer is present in a linear oxidized cyclodextrin copolymer of the invention, the same or different cyclodextrin monomers may be oxidized on either the primary hydroxyl side, the secondary hydroxyl side, or both. Specification, p. 20, lns. 9-13. Thus the term "oxidized" refers to the oxidation of a primary and/or secondary hydroxyl group of a cyclodextrin moiety. Since claims 11, 16, 17 and 37 are dependent claims, cyclodextrin monomer C is being further defined as an oxidized cyclodextrin monomer C and hence there must be a claimed difference. If not, as recognized by the Examiner, the claims would be necessary. Thus, the claims as written and in view of the specification particularly point out and distinctly claim the subject matter Applicants regard as the invention. The claims are not indefinite. Applicants respectfully request this rejection be withdrawn.

I. Claims 12 and 26.

It is the Examiner's position that the term "monomer" being derived from a cyclodextrin cannot by definition be an independent cyclodextrin compound. Applicants disagree and respectfully traverse the rejection.

The term "monomer" of claims 12 and 25 is part of the recited term "said cyclodextrin monomer C." Since both claims 12 and 26 are dependent claims, the term "said cyclodextrin monomer C" finds antecedent basis in claims 1 and 24, respectively. Based on the formulae of Ia and Ib of claims 1 and 24, the term "said cyclodextrin monomer C" is clearly defined. The metes and bound of Claims 12 and 26 are clearly defined. Applicants respectfully request this rejection be withdrawn.

J. Claim 16.

It is the Examiner's position that the term "substantially" is per se indefinite and thus requests deletion of the term from the claim. Applicants respectfully disagree and traverse the rejection.

According to MPEP 2173.05(b), paragraph D, the term "substantially" is not per se indefinite. Rather, the term "substantially" may be definite in view of the specification and knowledge of one of ordinary skill in the art. As explained on page 21, lns. 10-14 of the specification:

> It would be understood by one of ordinary skill in the art that under standard oxidation conditions that the degree of oxidation may vary or be varied per copolymer. Thus in one embodiment of the invention, a linear oxidized copolymer of the invention may contain one oxidized cyclodextrin monomer. In another embodiment, substantially all to all cyclodextrin monomers of the copolymer would be oxidized.

One of ordinary skill in the art would understand what was meant by the term "substantially all." The claim as written and in view of the specification particularly points out and distinctly claims the subject matter Applicants regard as the invention. The claim is not indefinite. Applicants respectfully request this rejection be withdrawn.

K. Claim 18.

It is the Examiner's position that the term "therapeutic composition" is non-standard terminology and that the claim is incomplete for failure to specify the additional active ingredient ("therapeutic agent") or a Markush group from which it may be selected. Applicants respectfully disagree and traverse this rejection.

Applicants submit for Examiner's consideration several issued patents having the term "therapeutic composition." (Exhibit B). As evidenced by the claims of the issued patents of Exhibit B, the term "therapeutic composition" may be used. As to the Examiner's request that Applicants amend the claims to "specify the additional active ingredient ("therapeutic agent") or a Markush group from which it may be selected," Applicants deem such a request improper. Applicants' claimed therapeutic composition consists of at least two elements: (1) a cyclodextrin copolymer of claims 1, 8, 9, 10, 11, 13, 14, or 15 and (2) a therapeutic agent. As discussed above, when a cyclodextrin copolymer is combined with a therapeutic agent, the mixture self-assembles in such a way that the therapeutic agent becomes associated with the linear cyclodextrin copolymers. Upon association, the cyclodextrin copolymer is able to act as a delivery vehicle for the therapeutic agent. Specification, pp. 27-28. The therapeutic agent may be any synthetic or naturally occurring biologically active therapeutic agent including those known in the art. Specification, p. 25, lns. 19-20. Examples of suitable therapeutic agents are provided on p. 25, lns. 21-24 of the specification. As would be understood by one of skill in the art, the therapeutic agent will vary depending upon the disorder to be treated. To add the requested language would place on undue limitation on Applicants' claimed invention. Thus, the claims as written and in view of the specification

particularly point out and distinctly claim the subject matter Applicants regard as the invention. The claim is not indefinite. Applicants respectfully request this rejection be withdrawn.

L. Claims 24-25 and 32-34.

As expressed on p. 7 of the Office action, it is the Examiner's position that the entire process is described in functional language using schematic representations of the products. The Examiner requests that complete chemical structures be provided. Applicants respectfully traverse this rejection.

Applicants' claimed invention is a method of preparing a linear cyclodextrin copolymer. According to the claimed method, a cyclodextrin monomer precursor is copolymerized with a comonomer A precursor for form a linear cyclodextrin copolymer having repeating units of formula Ia, Ib or a combination thereof. As discussed above, Applicant can be his or her own lexicographer. As discussed above, Applicants have clearly defined in the specification both the cyclodextrin monomer precursor and the comonomer A precursor. Copolymerization of the cyclodextrin monomer precursor and the comonomer A precursor is clearly recited in the claims. As to the use of schematics to define the final product, as discussed above such structures are permitted and are not considered indefinite. MPEP 2173.05(t), first and second paragraph. Furthermore, as explained on page 3 of the specification, a cyclodextrin moiety is commonly represented in the art as a "cup" of which the wider side of the cyclodextrin cup represents the 2° hydroxyl side of a cyclodextrin while the narrower side of the cyclodextrin cup represents the 1° hydroxyl side of a cyclodextrin. Still further, as discussed above, Applicants have clearly defined and described "cyclodextrin monomer C" and "comonomer A." Thus the claim as written and in view of the specification clearly and distinctly points out the subject matter of Applicants' invention. Applicants respectfully request this rejection be withdrawn.

M. Claims 25, 33 and 34.

The rejections of claims 25, 33 and 34 have been rendered moot by this amendment. Claims 25, 33 and 34 have been amended to correct a typographical error and add proper punctuation. Applicant respectfully request this rejection be withdrawn.

N. Claim 44.

It is the Examiner's position that claim 44, directed to a "method of treatment," is incomplete for failure to specify what disease or other medically treatable condition is being treated. This rejection has been rendered moot by the amendment of claim 44 to recite "a method of delivering a therapeutic agent. As discussed above, support for the amendment to the claim can be found on can be found in claim 44 as originally filed and pp. 27-28 of the specification. Applicants respectfully request this rejection be withdrawn.

III. <u>The Rejection of Claims 1-18, 24-34, 37 and 44 under 35 U.S.C. §112, First Paragraph</u>

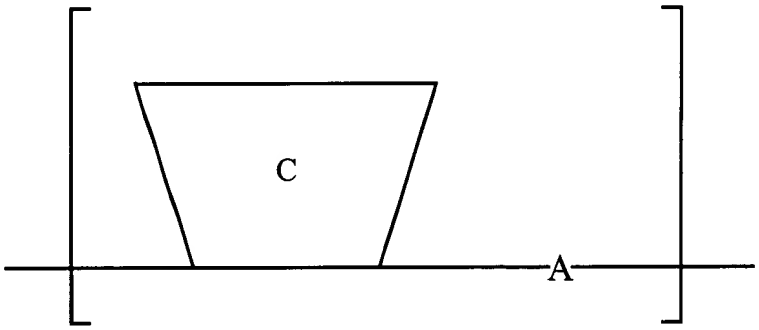
Claims 1-18, 24-34, 37 and 44 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one of ordinary skill in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, it is the Examiner's position that in claims 1-18, 24-34, 37 and 44, the use of generic terminology like "comonomer" and "cyclodextrin" implies fare wider scope of subject matter than applicant has enabled within the instant specific embodiments. The Examiner has requested that Applicants more nearly limit the scope of the instant claims to the scope of the enabled embodiments. Applicants respectfully disagree and traverse this rejection.

According to MPEP § 2164, second paragraph, the enablement requirement refers to the requirement of 35 U.S.C. 112, first paragraph that the specification describe the invention in such terms that one skilled in the art can make and use the claimed invention. In addition, the information contained in the specification must be sufficient to inform those skilled in the relevant

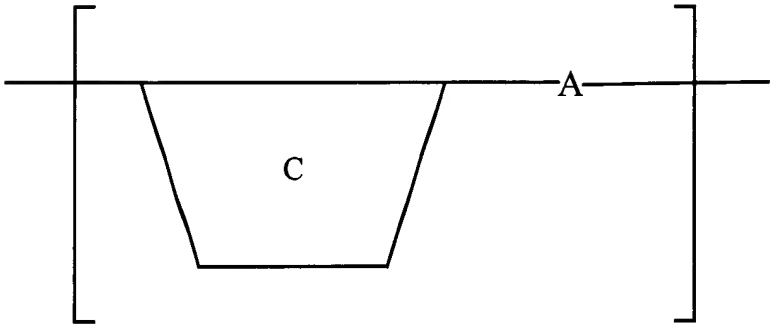
art how to both make and use the claimed invention. Detailed procedures for making and using the invention may not be necessary if the description of the invention itself is sufficient to permit those skilled in the art to make and use the invention.

According to MPEP § 2164.01, any analysis of whether a particular claim is supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention. The standard to be applied is whether undue or unreasonable experimentation is needed to practice the invention. *In re Wands*, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988).

Applicants' claimed invention is a linear cyclodextrin copolymer, a therapeutic composition comprising a linear cyclodextrin copolymer, a method of making a linear cyclodextrin copolymer, and a method of treatment comprising administering a therapeutic composition of the invention. According to Applicants' claimed invention, a linear cyclodextrin copolymer has a repeating unit of formula Ia, Ib or a combination thereof:



(Ia) , and



(Ib)

In formula (Ia) and (Ib), C is a substituted or unsubstituted cyclodextrin monomer and A is a comonomer bound to cyclodextrin monomer C. In the case of a linear oxidized cyclodextrin copolymer, at least one of cyclodextrin monomer C is oxidized.

Contrary to the Examiner's assertion, Applicants have not used generic terminology such as "comonomer" and "cyclodextrin" but defined terms of, respectively, "comonomer A" and "cyclodextrin monomer C." Polymerization of a cyclodextrin monomer C precursor with a comonomer A precursor results in a linear cyclodextrin copolymer of the invention. Specification, p. 8, lns. 3-5. Thus, as would be understood by one of skill in the art, a "cyclodextrin monomer C" is based on a "cyclodextrin monomer C precursor" and a "comonomer A" is based on a "comonomer A precursor." A "cyclodextrin monomer C precursor" is defined and described on p. 8, last paragraph through p. 11, ln. 12 of the specification. A "comonomer A" is defined and described on p. 11, ln. 13 through p. 15, ln. 9 of the specification. Furthermore, the specification provides numerous examples of the cyclodextrin monomers and linear cyclodextrin copolymers of the invention. Specification, pp. 29-39, Examples 1-16.

Thus based on the specification, one of ordinary skill in the art would be able use or practice the full scope of the claimed invention as recited in claims 1-18, 24-34, 17 and 44 without undue

experimentation. Applicants respectfully request this rejection under 35 U.S.C. § 112, first paragraph be withdrawn.

IV. The Rejection of Claims 1-2, 7-18, 24, 31, 37, and 44 under 35 U.S.C. § 102(e)

Claims 1-2, 7-18, 24, 31, 37, and 44 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Bachmann et al. '768 ("Bachmann"). Applicants respectfully disagree and traverse this rejection.

The Examiner refers Applicants to the '768 patent's abstract which refers to "biomedical articles," to column 3, lines 35-39, to column 5, lines 32-36, to column 7, lines 1-3, and to column 7, lines 19-23 and associated explanatory text as containing subject matter which reads directly on the instant claims including "oxidized" cyclodextrins as being an obvious variation following from contact with hydrogen peroxide in the presence of metal ions, a mixture well known to generate hydroxyl radicals, a known oxidizing agent.

Applicants' claimed invention is based on a linear cyclodextrin copolymer containing repeating units of formula (Ia), (Ib), or combination thereof. As a result of having of having repeating units of formula (Ia) or (Ib), the resulting linear cyclodextrin copolymer has more than one cyclodextrin moiety within the polymer backbone chain itself. As discussed below, Bachmann fails to teach or suggest a polymer having more than one cyclodextrin moiety, unoxidized or oxidized, in the polymer chain backbone. Thus, Bachmann fails to teach or suggest Applicants' claimed invention.

Bachmann describes polymerizable derivatives of carbohydrates comprising a compound of formula (I):

$$R'\text{——}(COO\text{-}Alk)_m\text{——}(OCONH\text{-}R)_n\text{-}(NHCO)_pY\text{—}Z \quad . \quad (I)$$

Abstract. In formula (I), the only cyclodextrin mentioned is in variable "Z." Abstract, and Col. 2, lns.30-32. Bachmann defines "Z" as follows:

> ...Z is a monovalent radical, minus a single hydroxy group, of a mono-, di- or tri-saccharide, of an oligosaccharide, of a cyclodextrin (CD) or of an anhydrosaccharide;...

Col. 2, lns. 30-32. Since Z is a monovalent radical, it is bound to the rest of Bachmann's compound at only one position. Thus, as shown by Bachmann's formula (I), Z terminates the portion of the compound of formula (I) attached to R′, "a radically polymerizable hydrocarbon group." Col. 2, ln. 24. Being terminal group, Z would not be a repeating unit of the polymer backbone chain upon polymerization of R′. Thus, when Z is a monovalent radical, minus a single hydroxy group, of a cyclodextrin, only a single cyclodextrin moiety would exist and that cyclodextrin moiety would not be within the polymer backbone chain. Furthermore, R′ by definition as a "radically polymerizable hydrocarbon group" would not contain a cyclodextrin group. Thus Bachmann would not teach or suggest a polymer having more than one cyclodextrin moiety, unoxidized or oxidized, in the polymer chain backbone as in Applicants' claimed invention. Thus, Bachmann neither anticipates nor renders obvious Applicants' claimed invention. Applicants respectfully request the rejection under 35 U.S.C. § 102(e) be withdrawn.

V. Provisional Rejection of Claims 19-23 and 44 under Doctrine of Obviousness-type Double Patenting

Applicants respectfully defer the resolution of the provisional obviousness-type double patenting or filing of a terminal disclaimer until the other issues in the application are clarified and resolved, *e.g.*, the indication of allowable subject matter in the present application.

VII. Objection to the Disclosure

As expressed on page 11, lines 1-7 of the Office Action, the disclosure is objected to because of the following formalities:

> at pages 42 and 44, last line of both, the structural representations incorporating a schematic "cyclodextrin" appear to contain pentavalent carbons. The same problem occurs at p. 48.

Applicants respectfully disagree.

Applicants note that, as recognized by the Examiner, the cyclodextrin found on pages 42, 44 and 48 are schematic. As schematic drawings, they represent a cyclodextrin moiety but not the actual cyclic polysaccharide structure of a cyclodextrin moiety. As explained on page 3 of the specification, a cyclodextrin moiety is commonly represented in the art as a "cup." Since the drawing is a representation, the "corner" of the cyclodextrin cup does not represent a single carbon atom. Consequently, the Examiner's characterization of the schematic cyclodextrin as containing a pentavalent carbon is incorrect. For example, the first figure of the last line of both page 42 and 44 and the figure on page 48 containing what the Examiner considers a "pentavalent carbon" actually represents an oxidized cyclodextrin containing an aldehyde moiety. Furthermore, the drawing is labeled "Oxidized Polymer (CD cup shown)." One of skill in the art, would not read a pentavalent carbon into the schematic drawing. Applicants respectfully request this objection be withdrawn.

VII. Conclusion

Applicants respectfully request reconsideration of the subject application in view of the above remarks. The subject application is now in condition for allowance and early notice to that effect is respectfully solicited.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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